VIRGINIA ELECTRIC AND POWER COMPANY
RICHMOND, VIRGINIA 23261

W. L. STEWART
VICE PRESIDENT
NUCLEAR OPERATIONS

September 9, 1983

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
Attn: Mr. James R. Miller, Chief
Operating Reactors Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Serial No. 431
PSE&C/HSM/cdk/0002N
Docket Nos.: 50-338
50-339
License Nos.: NPF-4
NPF-7

Gentlemen:

ADDITIONAL INFORMATION
PROPOSED OPERATING LICENSE AMENDMENT NPF-4 AND NPF-7
NORTH ANNA POWER STATION UNIT NOS. 1 AND 2

We have reviewed your letter of July 19, 1983 which requested additional information regarding the transshipment of spent fuel from the Surry Power Station to the North Anna Power Station Unit Nos. 1 and 2. The answers to the question in the enclosure to your letter are provided in Attachment 1.

If further information on this matter is required, we would be pleased to meet with your staff at their convenience.

Very truly yours,

W. L. Stewart

Attachment

cc: Mr. James P. O'Reilly
Regional Administrator
Region II
U. S. Nuclear Regulatory Commission
Atlanta, Georgia 30303

Mr. M. B. Shymlock
NRC Resident Inspector
North Anna Power Station

A001
1/1

Question 1:

Section 12.0, "Environmental Impact of the Proposed Action,: of "Summary of Information..." (Attachment 3 to VEPCO request for amendment dated July 13, 1982), is silent on the environmental impact of the transportation of spent fuel from Surry to North Anna. Add appropriate information on this topic.

Answer:

It is Vepco's opinion that information required by this question is contained in Table S-4, 10CFR51.20. This is discussed, in detail, in our answer to Question 2.

Question 2:

Discuss the applicability of Table S-4, 10 CFR 51.20, to your plans for shipping fuel from Surry to North Anna.

Answer:

The environmental impacts of the transportation of spent fuel from Surry were considered during Surry's operating license stage and are described in the Surry Power Station Unit 1 Final Environmental Statement (May 1972) pages 128-139, and the Surry Power Station Unit 2 Final Environmental Statement (June 1972) pages 128-139.

In order for environmental impacts to be reconsidered in this proceeding, a showing must be made that the new intervening circumstances arising from the present application bring into question the validity of the environmental impacts already determined for fuel transport when Surry was licensed. No special circumstances of this nature exist here. If it is assumed that the new intervening circumstances justify a reconsideration of Surry spent fuel transport impacts because of the present application, Table S-4, 10 CFR 51.20 should be used to assess those impacts.

As the NRC staff recognized in the Catawba proceeding, a case in which Duke Power Company sought to transship spent fuel to Catawba Power Station from other Duke Power Company facilities, Table S-4 was intended to provide a generic measure of fuel transport impacts. It was designed to eliminate the need for case-by-case, site specific development of transshipment impacts absent a showing that the particular fuel transport contemplated involves distances, population exposures, accident probabilities, and other factors "much greater" than those assumed in developing the Table S-4 impact values such that a waiver of application of Table S-4 is warranted pursuant to 10 CFR 2.758. In 40 Fed Reg 10005, 10907 (1975), the Statement of Considerations contemplates that Table S-4 applies even where the transshipment in question deviates from the assumptions made in the analysis in support of the rule ("Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants," Wash - 1238, December 1972), unless an exception to such applicability is sought and a waiver is granted by the Commission.

In view of the fact that the Table S-4 values were based on an assumption that the spent fuel would travel 1000 miles in 3 days to a fuel reprocessing plant, the shorter trip of 177 (maximum) miles from Surry to North Anna would certainly not carry with it any significant increased risk of accidents. Similarly, Table S-4's value for exposure to transport workers would not be compromised by the shorter transshipments here. The transshipments will meet all the conditions of applicability of 10 CFR 51.20(g)(2).

Table S-4 is applicable to Vepco's proposed transshipment even though the spent fuel is destined for North Anna instead of the hypothetical reprocessing plant referred to in Table S-4. According to the brief filed by the NRC staff in the Catawba proceeding, "(a) careful examination(s) of

the Commissions statement of considerations on the rule (Table S-4) indicates that although a reprocessing facility was assumed to be the ultimate destination of irradiated fuel, this assumption had no impact on the Commission's evaluation of the staff's analysis performed in support of the rule....The ultimate destination appears to have been considered immaterial, except for the purpose of estimating the average distance of irradiated fuel transport (1000 miles) and making assumptions about feasible methods of transport. What was considered important in determining the applicability of the rule was not the nature of the destination, but rather, whether the generic assumptions used in deriving the impact value in Table S-4 are applicable to.... the fuel transshipment in question. (NRC Staff Position on Applicability of Table S-4 to Transshipment of Spent Fuel from Oconee and McGuire to Catawba). In the Catawba proceeding, the ASLB held that Table S-4 applies to the transportation of spent fuel irrespective of whether a reprocessing plant is in fact the destination of the spent fuel, noting that the impacts would substantially be the same and therefore, that Table S-4 values would apply. The ASLB reiterated this conclusion in subsequent orders in the Catawba proceeding.

In summary, Vepco believes that the original FES for Surry adequately described and accounted for the environmental impact of spent fuel shipments. In lieu of this, however, Table S-4 would also be applicable and would envelope the environmental impacts of the transport of spent fuel from Surry to North Anna.

Question 3:

If Table S-4 does not apply, specify the average population density along each of the proposed routes, maximum irradiation level (burnup) of the spent fuel to be transshipped to North Anna, and the maximum number of shipments per year.

Answer:

Table S-4 is applicable. This is discussed, in detail, in our answer to Question 2.

Question 4:

How much, if any, of the Surry fuel stored at North Anna will eventually be returned to the Surry facility?

Answer:

The current Vepco plan for Surry spent fuel shipped to North Anna is for this fuel to remain at North Anna in interim storage until a Federal monitored retrievable storage facility or permanent repository is available. The Surry spent fuel at North Anna would then be shipped to the Federal facility.

Question 5:

Provide a description of the Vepco emergency plan for responding to spent fuel transportation accidents.

Answer:

As described in Appendix 14 of Transportation Accidents of the Commonwealth of Virginia Radiological Emergency Response Plan, the responsibility for responding to a transportation accident generally falls to the state and local government. A copy of Appendix 14 is attached. Based on this policy, Vepco's spent fuel transportation emergency plan will provide for radiological assistance to State and local governments during the initial phases of an accident. The plan provides for Vepco to take a lead role in (1) recovering the transport vehicle, (2) ensuring the shipment is completed in a timely manner, and (3) restoring the accident site, if appropriate.

The Vepco Spent Fuel Transportation Emergency Plan utilizes the existing corporate and nuclear power station emergency response structure. (Reference Vepco Corporate Emergency Response Plan and Surry and North Anna Power Stations Emergency Response Plans.) However, since this activity involves offsite transportation of radioactive materials, this structure is being supplemented as outlined below.

1. A Vepco recovery coordinator will travel with each shipment to ensure that, if an accident occurs, Vepco's response is properly coordinated and that accurate hazards information is provided to responding personnel from State and local governments. Also, this coordinator will ensure that Vepco management is provided with an accurate assessment of the accident and provide recommendations to management on the extent of Vepco's response.

2. A Vepco communications control center, established primarily for safeguards purposes, will also provide a communications link between an accident scene and State and local governments and Vepco management. This center, manned continuously during each shipment, will ensure that all emergency notifications have been made and will activate the Corporate and Station Emergency Response Plans, if appropriate.

3. Vepco personnel and equipment from the Surry or North Anna Power Stations will be made available at the accident scene to assist State and local governments in providing an evaluation of the existing radiological conditions and recommendations on protective actions to safeguard the general public.

4. Vepco will make available equipment for cask recovery and site restoration.

In addition, while not part of the Vepco emergency plan, Vepco has prepared an information presentation for local emergency response personnel on spent fuel shipments from Surry to North Anna. Using films, slides and U. S. Department of Transportation publications, this presentation provides information on radiation principles, shipping cask design, and general security provisions, and provides reference material with guidance for first on the scene responders. This presentation was developed in coordination with State and Local government officials. It has been given a number of times and is available on request to any locality along our NRC approved shipping routes.

ATTACHMENT

QUESTION 5

Appendix 14

Transportation Accidents

I. REFERENCES

A. Radioactive Materials Transportation Information and Incident Guidance, DOT/RSPA/MTB-81/4, U.S. Department of Transportation, 1981.

B. Hazardous Materials, Emergency Response Guidebook (DOT-P-5800.2), U.S. Department of Transportation, 1980.

C. A Review of the Department of Transportation (DOT) Regulations for Transportation of Radioactive Materials, U.S. DOT, Washington, D.C., October 1977.

D. Guidance for Developing and Reviewing State and Local Radiological Emergency Response Plans for Transportation Accidents, FEMA/DOT, 1982 (draft).

E. Regulations for Transportation of Hazardous Radioactive Materials, Commonwealth of Virginia, State Board of Health, February 15, 1980.

II. DEFINITIONS

A. See Appendix 15 of this Plan.

B. See Section 2.00, Reference I.E.

III. MISSION

The mission of the State and local governments is to plan for, prepare for, and conduct response to transportation accidents involving radioactive materials.

IV. SITUATION

A. Radioactive materials may be transported within the State by any of four basic modes--air, water, highway, or railroad. The majority of radioactive materials, however, will move by motor vehicle over existing road nets. The concepts and procedures delineated for transportation accidents emphasize this mode but are equally applicable for the other modes.

B. Although the shipper and carrier bear the primary responsibility for assuring that radioactive materials

are safely packaged and transported, responsibility for responding to a transportation accident generally falls to the State and local governments. About 70 hazardous radioactive material shipments, exceeding Type B quantities, per year transit Virginia. (See Tab A for packaging requirements.) These are processed in accordance with the procedures contained at Reference I.E.

C. A transportation accident involving radioactive materials poses a potential biological hazard not only to those involved in the accident, but also to emergency services personnel and the public in the near vicinity of the accident. Locally-available trained radiological monitors are used initially to determine the extent of radioactive contamination to protect emergency services personnel involved. Radiological health personnel who respond later provide follow-on advice and response.

D. See Tab A for excerpts of pertinent publications which address the transportation of radioactive materials.

V. RESPONSIBILITIES

The following responsibilities supplement the detailed listing at Appendix 1, Task Assignments.

A. State Agencies

1. Board of Health, State

a. Serves as the governing body of the State Department of Health.

b. Develops and updates regulations governing the transportation of certain hazardous radioactive materials in and through the State.

c. Defines hazardous radioactive materials which may constitute a significant potential danger to the citizens of the State in the event of accidental spillage or release.

2. Health, Department of

a. Acts for the Board when it is not in session.

b. Provides technical assistance and advises on radiological matters.

c. Dispatches the Radiological Emergency Response Team (RERT) for radiological assistance and

response to the accident site.

d. Receives applications to transport radioactive materials within Virginia, issues registration certificates, and provides registration information to the Office of Emergency Services.

3. Emergency Services, Office of

a. Monitors the transportation of hazardous radioactive materials within the State.

b. Disseminates information about shipments and changes to local law enforcement agencies.

c. Coordinates emergency response actions and communications of Federal, State, and local governments.

d. Submits a report summarizing the activities carried out under the regulations included at Reference I.E. to the Department of Health, the Governor's Office, and the General Assembly at least annually.

B. Local Governments

1. Respond to radiological transportation accidents using locally available resources. Request assistance directly from State agencies or the State EOC which will obtain assistance from other State agencies and the Federal government (except DOE monitoring and assessment) and coordinate the overall response.

2. Negotiate agreements with the political subdivisions of contiguous states addressing responses to incidents in close proximity to a common border.

3. Develop a plan or annex to an existing plan which responds to transportation accidents involving radioactive materials.

C. Federal Government

1. Department of Energy

Coordinates and directs the Federal response to peacetime accidents in which radiological monitoring and assessment capabilities are required. This assistance is provided under DOE's Federal Radiological Monitoring and Assessment Plan (FRMAP).

2. Federal Emergency Management Agency

Coordinates and directs the Federal response to accidents for which a Presidential declaration (emergency or major disaster) has been made under Public Law 93-288. FEMA also coordinates the Federal response to nuclear weapons accidents.

3. Joint Nuclear Accident Coordinating Center (JNACC)

If a transportation accident involves nuclear military materials or devices, State or local government should immediately notify the nearest military installation which will notify the JNACC.

VI. OPERATIONAL CONCEPTS AND PROCEDURES

A. Concept of Operations

1. Response

a. Local government officials of the political jurisdiction in which the accident occurs are responsible for the overall response as it affects the general public. Technical guidance and assistance in the radiological aspects will be provided by the State Department of Health. The overall State response will be coordinated by the State Office of Emergency Services.

b. Immediate response to a transportation accident involving radioactive materials should be limited to:

(1) Aiding the injured.

(2) Preventing access to the area surrounding the accident.

(3) Determining action required to prevent further hazard, including evacuation of people from the immediate area if fire is involved or explosion appears likely.

(4) Reporting the accident in accordance with paragraph VI.A.2.a. below.

c. Follow-on response should be in accordance with recommendations from Radiological Health personnel of the State Department of Health.

2. Requests for Assistance

a. For technical assistance and advice concerning the radiation aspects:

(1) During duty hours (8:15 a.m. - 5:00 p.m.), Monday through Friday, call Bureau of Radiological Health, State Department of Health, telephone (804) 786-5932 or 786-4265.

(2) During off-duty hours or holidays, call Bureau of Radiological Health Duty Officer, telephone (804) 323-2300.

b. For other assistance, call the State Office of Emergency Services, telephone (804) 323-2300 (day or night).

B. Procedures

1. Response

a. Initial response until it has been determined that no radiation hazard exists:

(1) Conventional lifesaving first aid has absolute priority in the management of persons injured in a transportation accident. Do NOT move vehicles, shipping containers, or wreckage except to rescue people.

(2) Key items identifying a potential radiation accident should be looked for. Such items include RADIOACTIVE transport placards attached to vehicles, RADIOACTIVE shipping labels attached to containers, or information obtained from the driver or victims. Unless prevented by hazardous conditions at the accident site, emergency response personnel should examine the shipping papers from the transport vehicle prior to making calls for technical assistance. These papers provide valuable information about the nature of the radioactive material involved and may be needed to provide for a proper response to a transportation accident.

(3) Contaminated clothing should be removed except when prohibited by victim's medical condition, adverse weather, etc. If it is necessary to send an individual to the hospital, inform ambulance and other

transportation personnel who will be in contact with the individual of the possibility of radioactive contamination. Also ensure that the hospital or medical facility is apprised of this fact.

(4) Isolate and secure the accident scene. Prevent access to the surrounding area for as large a distance as practical in all directions. Keep the public at least 200 feet away from the wreckage and associated debris.

(5) Evacuate to a 1,500-feet distance if fire is involved or an explosion is likely.

(6) Detain for monitoring and possible decontamination persons who may have been exposed to radiation or at least obtain their names, addresses, and destinations if they cannot be persuaded to stay at the accident scene.

(7) Locally-available trained radiological monitors may be used to determine the extent of radioactive contamination as necessary to protect emergency services personnel at the scene.

(8) Take no further action until advised by radiological health personnel.

(9) See paragraph F, Tab A, for additional actions to be taken by response personnel at transportation accidents involving radioactive materials.

(10) See Tab B for response organization for transportation accidents.

b. Follow-on

Bureau of Radiological Health (BRH) personnel or consultants to the State Department of Health will provide to local government authorities technical assistance and advice on the radiation hazard, methods of protection, decontamination, and disposition of the radioactive materials involved. The Radiological Emergency Response Team (RERT) and/or Mobile Laboratory will be dispatched if necessary.

c. Transportation of Hazardous Radioactive Materials

The provisions of Title 44, Chapter 3.3, Section 44-146.30 of Authority I.A.1, Regulations for the Transportation of Hazardous Radioactive Materials, were implemented on February 15, 1980. The Coordinator, Office of Emergency Services, pursuant to rules and regulations promulgated by the Board of Health, monitors the transportation within the Commonwealth of those radioactive materials, as defined by the Board of Health, which may constitute a significant potential danger to the citizens of the Commonwealth in the event of accidental spillage and release. Persons shipping or transporting hazardous radioactive materials within the State shall register these shipments with the Department of Health 30 days prior to the shipment date. Upon receipt of a complete application form, the Commissioner will issue a registration certificate. Registration information will be provided to the Coordinator, OES. The Coordinator has developed implementing procedures for monitoring the transportation of hazardous radioactive materials in the State. The Operations Division, State OES, telephone (804) 323-2300, performs this function within the Commonwealth.

2. Requests for Assistance

a. Requests for assistance should include:

(1) Place and time of the accident.

(2) Type of accident (air, rail, motor vehicle, ship).

(3) Quantity and chemical and physical form of radioactive materials involved. This information may be obtained by examining the bill of lading or manifest. The vehicle operator may provide this information also.

(4) Damage to packaging of radioactive materials and, if known, any information about possible releases.

(5) Response procedures underway and actions taken to isolate and secure the accident scene.

(6) Name and telephone number (or communications channel identification) of individual in charge at the accident scene.

(7) Assistance required.

b. Additional information to have for reporting should include:

(1) Injured persons requiring lifesaving assistance and other medical care.

(2) Weather conditions at the accident scene.

(3) Prognosis of worsening or termination of event based on current information.

(4) Upgraded information provided on a continuing basis.

3. Federal Assistance

a. Military Accidents. If a transportation accident involves military materials or devices, the Operations Division, State OES, telephone (804) 323-2300, should be notified immediately. The State EOC will notify officials at the nearest military installation and the Joint Nuclear Accident Coordinating Center (JNACC) at Kirtland Air Force Base, Albuquerque, New Mexico, (505) 844-4667. JNACC will notify and coordinate the deployment of specialized teams. Unless it is necessary to approach a nuclear weapon to rescue injured individuals, first-on-the-scene responders at such an accident should establish an exclusion zone with a radius of 2,000 feet.

b. Multiple Hazard Situations. The presence of mixed-cargo hazardous materials is of the highest concern in regard to rail shipments. Toxic chemicals, biohazards and flammable agents can present problems of more immediate concern than radioactive materials. CHEMTREC (Chemical Transportation Emergency Center) is a 24-hour service to provide advice to those at the scene of transportation emergencies involving chemical hazardous materials. The toll-free number is 1-800-424-9300.

c. Other Assistance. As a back-up to State and local emergency response efforts, response teams consisting of Federal and contract personnel are located at most

USDOE laboratories and at laboratories and offices of other Federal agencies across the country. USDOE will coordinate the Federal response upon request to provide information, advice, or assistance through the Federal Radiological Monitoring and Assessment Plan. The State EOC can contact the USDOE Regional Coordinating Office at the Oak Ridge Operations Office, (615) 576-1005 or (615) 525-7885, for radiological assistance.

TABS

A - Transportation Accidents Involving Radioactive Materials
B - Response Organization for Transportation Accidents

Tab A to Appendix 14

Transportation Accidents Involving Radioactive Materials

A. Historical Experiences

During the period 1971-1975, more than 32,000 hazardous materials incident (HMI) reports were filed with the U.S. Department of Transportation. Of this total, 144 reports (1/2 of 1%) involved shipments of radioactive materials. Of the 144 shipments, 36 indicated release of radioactive materials from the container. Accident analysis and statistical surveys indicate that the most commonly encountered problem involves Type A packages in transit via highway or mishandling during loading or unloading operations. As of early 1981, there have been no known deaths, disabilities, serious injuries, or major property damage resulting from radioactive material involved in a transportation accident.

B. Classification of Accidents

Transportation accidents can be generally classified into two types: low hazard with high probability and high hazard with low probability. The low hazard with high probability accident generally involves Type A and Type B packages and would not result in a release of dangerous amounts of radioactive materials. The high hazard with low probability accident involves Large Quantity Type B packages which might be damaged with releases of radioactive materials in very severe accidents. Type A packages contain no more than 0.001 to 20 curies, depending upon the radionuclides, and must be designed to withstand only moderate degrees of stress. Structural design requirements for Type B packaging are more stringent, whereby Type B packages generally contain 20 to 50,000 curies. In either case, the radiological impact would probably be limited to the immediate vicinity of the accident.

C. Packages and Casks

1. Packaging requirements

These are based on type of radioactive material quantity, form, specific activity, and fissile properties. There are five general categories:

a. Limited Quantity Materials

Exempt from most requirements specified in Federal Regulations. No requirement for use of outside warning labels or markings for shipment. Most are shipped through the U.S. Postal Service or common carrier. They include smoke detectors, luminous dials, and some medical diagnostic kits.

b. Low Specific Activity

Low limits of radioactivity with minimal risks if contents were dispersed in an accident. Shipments may be by Type A packages or "strong tight packages". They include uranium concentrate, natural uranium, and low level waste.

c. Type A

Designed to withstand the stress of transit under non-accident conditions (e.g., rough handling). Because of the smaller quantities of material permitted in Type A packages, accidents causing damages to such packages would be unlikely to result in serious radiation hazards. They constitute the majority of shipments and must only withstand moderate degrees of stress for such conditions as heat, cold, reduced air pressure, vibration, impact, water, drugs, penetration, and compression. Includes radiopharmaceuticals, research, industrial sources, and some fuel cycle materials.

d. Type B

Designed for transport of much greater quantities of radioactive materials. In addition to meeting standards for Type B packages, they must withstand crush, puncture, thermal, and water immersion stresses that might be experienced under actual or hypothetical transportation accident conditions. They include research and industrial sources and certain fuel cycle materials.

e. Type B Large Quantity

Designed to withstand the same hypothetical accident stresses as Type B. They may contain thousands of curies and could cause serious health effects if packages are breached. They include research and industrial sources and spent nuclear fuel.

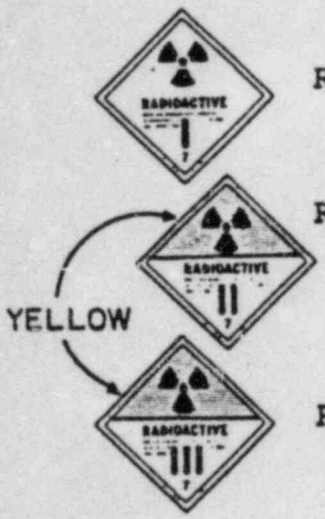
2. Safety Tests

Tests on spent fuel casks were performed by Sandia Laboratories and other agencies. These consisted of mathematical analysis, scale-model testing, and actual accident scenario tests involving impacts of 60 to 80 miles per hour. All casks withstood the tests. To date, there have been no reports of damage to Type B or special containers involved in transportation accidents that resulted in loss of material or loss of shielding effectiveness.

C. Warning Labels and Placards

1. Labels

Three different labels are used on the external surface of packages for radioactive material. The required label is usually determined by the external radiation level or by the type and quantity of radionuclides within the package. Package labels must specify the radionuclide (contents) and quantity (curies).



Label	Radiation Level
Radioactive - White I	Almost no radiation; 0.5 mR/hr maximum on surface.
Radioactive - Yellow II	Low radiation levels; 50 mR/hr maximum on surface, 1 mR/hr maximum at 3 feet.
Radioactive - Yellow III	Higher radiation levels; 200 mR/hr maximum on surface, 10 mR/hr maximum at 3 feet and for large shipments.

2. Placards

Motor vehicles, rail cars, and freight containers carrying large quantities or potentially hazardous amounts of radioactive material display RADIOACTIVE warning placards. All four sides of the vehicle must be placarded. These alert response personnel to possible radiation risks. In an accident, labels and placards may be obliterated or destroyed. Response

personnel should then query the driver, check shipping papers, and monitor the area to determine radiological conditions.

D. Shipping Papers

Every shipment of radioactive material must be accompanied by properly completed and shipper-certified shipping papers (e.g., bills of lading or cargo manifests). The information required on the shipping papers will assist emergency personnel in properly responding at the scene, as well as for requesting assistance. Caution in response should be taken when there is likelihood that radiological materials are being shipped with other hazardous materials.

E. Special Nuclear Materials and Weapons

Special nuclear materials (e.g., reactor fuel, plutonium, and nuclear weapons components) present a great potential radiological hazard because of their higher specific activity and radiotoxicity. They generally are transported with an armed escort in separate vehicles. Nuclear weapons require special attention. Because of the required sequence of arming and firing, it is highly unlikely that a nuclear weapon involved in a transportation accident would detonate. The risks consist of conventional high explosives and plutonium and their exposure to fire. Normal procedures and precautions applicable to fires should be taken. If a fire occurs and the explosives detonate, plutonium could spread and constitute a serious hazard if inhaled or ingested into the body. In the absence of a need to recover injured personnel, no attempt should be made to extinguish fires or otherwise approach a nuclear weapon involved in a transportation accident. The first responders should establish an exclusion zone with a radius of 2,000 feet and immediately notify the State EOC at (804) 323-2300 which will activate the State Radiological Emergency Response Team and notify the Joint Nuclear Accident Coordinating Center (JNACC).

F. Emergency Response

Persons seriously injured in any accident need immediate emergency medical care, possibly lifesaving first aid, and transportation to a hospital. Radioactive contamination of a wound or skin is not likely to be immediately life-threatening to the accident victim and even less likely to interfere with rescue and first aid. An appropriate sequence for responding to transportation accidents follows, emergency personnel first arriving on

the scene will take those actions within their capability.

1. Park emergency vehicles upwind.
2. Examine the accident scene and the surrounding area.
3. Treat victims.
4. Fight fires and other hazards.
5. Determine if shipment involves radioactive materials (placards, labels, shipping documents).
6. Notify local and State EOC's on the extent of the accident, actions being taken, and assistance required.
7. Conduct preliminary survey for radiological contamination.
8. Move victims away from contaminated area when conditions permit. Remove contaminated clothing and attach disaster tag.
9. Keep unnecessary persons away from the area.
10. Avoid direct contact with radioactive material where possible.
11. Conduct detailed monitoring of the area.
12. Monitor all response personnel and decontaminate if necessary.
13. Monitor, decontaminate, and control all personnel, clothing, and equipment.
14. Record and report all activities to supervisors when time permits.
15. Have available and use protective clothing, if appropriate.
16. Use plastic bags to collect contaminated items. Note locations where samples originated (label bags on source and contents).
17. Do not allow eating, drinking, smoking, or other activities within contaminated areas that might lead to intake of radioactive materials.

Tab B to Appendix 14

Response Organization for Transportation Accidents